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CERTIFICATE UNDER 37 CFR 1.10
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Name: Linda McCormick

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- ☒ Transmittal sheet, in duplicate, containing Certificate under 37 CFR 1.10.
- ☒ Utility Patent Application: Spec. 9 pgs; 44 claims; Abstract 1 pg.
  The fee has been calculated as shown below in the 'Claims as Filed' table.
- ☒ Five sheets of formal drawings
- ☒ A signed Combined Declaration and Power of Attorney
- ☒ Assignment of the invention to TCF Financial Corporation, Recordation Form Cover Sheet
- ☒ A check in the amount of $1668.00 to cover the Filing Fee
- ☒ A check for $40.00 to cover the Assignment Recording Fee.
- ☒ Return postcard

CLAIMS AS FILED

Number of Claims Filed		In Excess of:		Number Extra		Rate		Fee
Basic Filing Fee								$690.00
Total Claims								
44	-	20	=	24	x	18.00	=	$432.00
Independent Claims								
10	-	3	=	7	x	78.00	=	$546.00
MULTIPLE DEPENDENT CLAIM FEE								$0.00
TOTAL FILING FEE								$1668.00

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M&G No. 11348.36US01

Debit Card Billing System

The present invention relates to a debit card billing system for checking or other banking institution accounts.

Background of the Invention

Modern consumers have become accustomed to the safety and convenience of making purchase transactions at remote points of sale using credit cards instead of cash. Credit cards allow a consumer to make purchases on credit accounts in which a credit card issuing institution records purchases to a consumer's account and then sends a monthly billing statement to the consumer. If the consumer elects not to pay off the entire balance of the account at the end of the billing cycle, then the credit card issuing institution typically collects interest on the outstanding balance on the account.

In response to the success of credit cards, banking institutions such as banks and credit unions have developed debit cards which can be used just like credit cards to make purchases. However, unlike credit cards, the purchases are immediately posted to the consumer's checking account as if the consumer had written a check. Therefore, the consumer is not required to pay a monthly statement because the funds to cover the purchase are taken immediately and directly from the consumer's checking account.

Debit card accounts have drawbacks when compared to normal credit card accounts. There may be more than one cardholder drawing on an account such as in a joint checking account. With present debit account systems, using two debit cards for one account can result in overdrafts when both users unknowingly make debit transactions during the same time period. Because both cards draw upon the same account just like checks, two users may inadvertently draw upon the same funds resulting in an overdraft.

In addition, the typical debit account user loses interest compared to a credit card user. Because debit card transactions are posted to the checking account in the same way as checks, a user can expect the checking account to be drawn upon within a few days of the debit transaction. Credit card accounts, on the other hand, allow the user to keep funds in an interest bearing account until the end of a billing cycle before they are needed to pay the credit card bill. By waiting until the end of the month to pay a credit card bill, the credit card user receives interest on the funds for the remaining period of the billing cycle. Current debit card systems employed by banks, however, immediately debit the checking account just like a check would be debited. Therefore, a current debit card user does not receive the added interest he might have gained by keeping the funds in the interest bearing account for the remainder of a billing period.

Summary of the Invention

The present invention is a method and system for managing an account for use by a banking institution which provides checking or savings account services. An account user is provided with a debit card which can be used to make debit transactions, each transaction being recorded by the bank but not billed to the account until after a billing cycle elapses and after the account user has been issued a billing cycle statement showing all credit transactions. The system automatically debits the account for all debit transactions made during the billing cycle after a payment period elapses following issuance of the statement.

The system has a number of advantages over prior checking account billing systems. First, the system combines into one card the ability to make automated banking transactions on an account with the ability to make debit purchases against the account. Although prior billing systems employ debit cards with financial accounts, these systems do not defer the time of payment as would a credit card account. The present system actually defers the time of payment as a credit card

account would, but combines this ability with the convenience of a banking card tied to a particular financial account.

The system also overcomes a problem associated with joint accounts. All debit transactions made with the transaction cards issued on the financial account are stored in the system until the end of a billing cycle without being debited against the account. At the end of the billing cycle, all the debit transactions for the billing cycle are reported to the debit card account holders. The debit card account holders are able to review the debit transactions and have the opportunity to supply additional funds or alternative sources of payment other than a direct debit to the account. In this way, joint checking account holders can avoid inadvertent overdrafts.

In addition, through the present system, the debit card account holder receives the advantage of accruing interest on funds which remain in the account during the time that elapses between the debit transaction and the actual debiting of the account for the transaction. Because the system defers debiting the account for the debit transactions until after the billing cycle and after a payment period following the billing cycle, the debit card account holder is able to capture the interest earned on funds which remain in the account during the deferred period.

Brief Description of the Drawings

FIG. 1 is a schematic flow chart of a debit transaction authorization process in accordance with the preferred embodiment of the present invention.

FIG. 2 is a schematic flow chart of a debit transaction settlement process in accordance with the preferred embodiment of the present invention.

FIG. 3 is a schematic flow chart of the statement and debit process in accordance with the preferred embodiment of the present invention.

FIG. 4 is a schematic diagram of the components of a computer system for implementing the present invention.

FIG. 5 is a schematic diagram of a networked computer managing system for implementing the present invention.

Detailed Description of the Preferred Embodiment

The present system for managing a financial institution account, such as a checking or savings account, combines the monthly billing schedule of a credit card account with the automatic debiting of a debit account to provide an account holder with greater flexibility and control over cash management. The system includes a transaction card which the account holder can use to make automated banking transactions as well as debit transactions. Greater flexibility as well as convenience is afforded the debit card account holder by the system in that debit transaction information is accumulated and stored for a billing cycle period without being posted against the funds in the account. At the end of the billing cycle a report or statement of debit transactions is produced for the debit card account holder's review. Only after a predetermined payment period elapses after producing the statement is the account automatically debited for all debit transactions of the billing cycle.

FIGS. 1 and 2 show a debit transaction authorization process and a debit transaction settlement process respectively. In a typical debit transaction, there are a number of parties involved. The transaction involves a consumer or debit card account holder with a debit card 2, a merchant with a point of sale processor 4, a debit card issuing financial institution 10 which issued the debit card for use with the consumer's account, a credit institution 6 such as VISA or MASTERCARD, and often an intermediary clearinghouse or debit processing service 8. The debit card issuing financial institution 10 may be any bank, credit union or similar institution at which the consumer or account holder has opened a checking, savings, or other financial account.

A debit transaction occurs in two phases or steps. Typically, the first phase is an authorization phase. The authorization process is shown in FIG. 1. In the authorization phase the merchant 4 obtains verification and authorization from the debit card issuing financial institution 10 that the debit card 2 is valid and that the user has not exhausted a deferred purchase periodic limit. The authorization phase

occurs before the merchant 4 allows the consumer to make the purchase. The second phase is typically a settlement phase. The settlement phase is shown in FIG. 2. In the settlement phase funds are eventually transferred from the consumer's account at the financial institution to the merchant.

In the authorization phase of the present system, the debit card user first presents a debit card 2 to the merchant 4 in order to make a purchase. The merchant swipes the card through a point of sale processor which reads account information encoded on card 2 and combines it with information such as the date and the amount of the purchase and merchant identification. The point of sale system transmits the debit transaction information to the credit institution 6 identified by the card 2 such as VISA.

The credit institution 6 then identifies the card issuing financial institution 10 and transmits the debit transaction information to the card issuing financial institution 10 either directly or through a debit processing service 8. The information is received by the card issuing financial institution 10 by a managing computer system 50 as shown in FIG. 4. The information may be received by the computer system via a receiver system 40 which typically employs high speed dedicated communication lines. After identifying an account corresponding to the debit card 2 being used, the managing computer system 50 runs verifications against the identified account to determine whether the debit transaction should be authorized. The account status is verified 12 as a valid, open account that has not been put on hold. The amount of the purchase is checked against a deferred debit purchase monthly spending limit 14. The deferred debit purchase spending limit is the amount in debit purchases the debit card account holder is permitted to make each month and may be, for example, between $1,000 and $20,000.

Upon approval by the card issuing financial institution 10, an authorization record is stored 16 in the managing computer system's memory system 44, noting the debit transaction information. An authorization signal is then sent back

from the card issuing financial institution 10 through the credit institution 6 to the merchant's point of sale processor 4 where the debit transaction is authorized.

The settlement phase begins when the merchant 4 or the merchant's bank 20 requests payment from the credit institution 6 to cover the debit transactions authorized by the card issuing financial institution 10. Typically, at the end of a business day a merchant 4 will total the debit transactions performed and request payment from the credit institution 6. The credit institution 6 pays the merchant 4 and demands payment from the card issuing financial institution 10 by issuing a schedule or posting file 22 of all the transactions authorized by the card issuing financial institution 10. When the card issuing financial institution 10 receives the posting file, the financial institution's managing computer system 50 verifies each debit transaction listed against the authorization records stored when the authorization was given 24. Upon verification, the card issuing institution 10 makes payment to the credit institution 6. Shortly thereafter, in prior art systems, and typically through on-line or batch processing, the managing computer system debits the consumer's checking account for the amount of the transaction and eliminates the authorization record, thereby completing the debit transaction.

However, in the present system, the card issuing financial institution's managing computer system 50 is configured so that, during the settlement phase, after the receipt of the posting file 22, and after the card issuing financial institution 10 makes payment to the credit institution 6, the managing computer system 50 makes a deferred transaction billing record or history 26 without debiting the amount of the transaction against the consumer's account. The spending limit balance available is then updated 28 to reflect the purchase made.

A managing computer system 50 configured according to the present invention accumulates a billing record of all debit transactions for a billing cycle, typically one month, without debiting the consumer's account. The debiting of the account is deferred. In this manner a deferred transaction history is maintained for each account. As shown in FIG. 3, at the end of the billing cycle, the managing

computer system 50 recalls the billing history and issues a statement which includes a notice itemizing and totaling the deferred debit transaction history for the consumer's account. The statement shows an accrued debit balance for the billing cycle. Once the statement is issued to the debit card account holder 30, the billing cycle spending limit is reset 32, allowing the debit card account holder to make additional deferred purchases for a new billing cycle. The statement may be made either through conventional hard copy reports or through electronic means. For example, the statement may be made available to the consumer by electronically posting the statement information at a secure site such as an internet site accessible by the account holder's personal computer 56, or through an automated telephone service.

The managing computer system 50 includes a memory system 44. FIG. 5 shows how the memory system 44 may be divided into databases that may include an account database 60, a deferred history database 62, and an authorization record database 64. A record of authorization is made in the authorization record database 64 during the authorization phase as described above. The record may then be recalled from the authorization record database 64 and a new record made in the deferred history database 62 during the settlement phase.

After providing a statement to the debit card account holder, the managing computer system initiates a payment period countdown 34. During the payment period countdown the debit card account holder has the opportunity to designate or provide sources of payment to cover the debit transactions by supplementing the funds of the account itself or by designating another account. The account holder may transfer funds from a credit line or from funds outside the debit card issuing financial institution. The transfer may be accomplished by phone or even electronically. Any payments made during the payment period are deducted from the accrued debit balance 36 which may be recorded in a deferred history database. When the payment period expires, the managing computer system automatically debits the debit card account or another designated account for the accrued debit balance 38. In one preferred embodiment the payment period is a period of fifteen

days. The debiting may be accomplished by recalling the deferred debit balance 38 from the deferred history database 62 and debiting an account database 60 as shown in FIG. 5.

The system may also be configured so that the debit cards may be used in automated teller machines 54 to make automated banking transactions such as deposits and withdrawals. The managing computer system 50 according to the present invention may be configured to distinguish automated banking transactions from debit transactions wherein only the debiting of the debit transactions is deferred during the payment period. Accordingly, depending upon system configurations, automated banking transactions either may be posted to the account during on-line or batch processing, or they may be deferred according to the present invention.

By combining debit card purchasing and deferred billing utilizing a single transaction card to accomplish both debit transactions as well as automated banking, a debit card account holder can reduce the number of cards needed to perform all of these functions. Reducing the number of cards is not only more convenient for the debit card account holder but also decreases the risk of having multiple cards lost or stolen.

In summary, the present invention is directed to a deferred billing debit card system and method for managing an account at a financial institution. The system and method are to be used in conjunction with a transaction card 2 which is encoded with computer-readable information identifying the financial institution 10 and the account at the financial institution 10. An account holder uses the transaction card 2 to make debit purchases and transactions. The system includes a receiver system 40 which may include high speed dedicated phone or communication lines for receiving electronically transmitted debit transaction information generated by the account holder's use of the transaction card 2 in making a debit transaction. The debit transaction information is stored in a computer-readable memory system 44. A computer processor system 42 recalls the debit transaction information from the memory system 44 and aggregates the debit transaction information in a statement

showing an accrued debit balance 30 for a billing cycle. The computer processor system 42 automatically debits the account for the accrued debit balance 38 but not until after the end of the billing cycle and after the account holder is given an opportunity during a payment period 34 to provide a source of payment to cover all or part of the accrued debit balance.

The present invention may be configured to include an output system 46 by which the billing system makes the statement available to the account holder. The output system 46 may include a printer system for generating hard copy statements to be sent by mail to the account holder or the statement may be made available by electronic means via electronic mail or posting on a secure internet site.

The present invention may also be configured to work in conjunction with a transaction card that has also been encoded to be capable of use in automated banking transactions.

The present invention is to be limited only in accordance with the scope of the appended claims, since persons skilled in the art may devise other embodiments still within the limits of the claims. For example, the features described in the present application are not limited to a bank but apply to other financial institutions such as a credit union, a trust company, a savings and loan association, or a savings association. Furthermore, the present systems and methods may be applied to financial institution accounts beyond checking accounts, such as by designating payment of accumulated debit transactions against a savings account.

WE CLAIM:

1. A deferred-billing, debit-card processing system for managing an account holder's financial institution account, the processing system being configured for use with a transaction card encoded with computer-readable information for identifying a financial institution and the account holder's account at the financial institution, the card being capable of use in making debit transactions, the processing system comprising,

a receiver for receiving electronically transmitted debit transaction information from remote points of sale, the debit transaction information being produced at remote points of sale when the encoded information on the transaction card is read by a computer in a debit transaction,

a computer-readable memory system for retrievably storing the debit transaction information,

a computer processor system for electronically recalling the debit transaction information from the memory system and for aggregating the debit transaction information for a billing cycle in a statement showing an accrued debit balance,

wherein the processing system stores the debit transaction information without automatically debiting the debit transactions against the account until after the end of the billing cycle and after the account holder is given an opportunity to provide a source of payment to cover all or part of the accrued debit balance.

2. The deferred-billing, debit-card processing system of claim 1 wherein the computer processor system makes the statement available to the account holder by one of the steps of the group consisting of transmitting the statement to the account holder

electronically, posting the statement at a secure site for access by the account holder, or printing a hard copy of the statement to be sent to the account holder by conventional mail.

3. The deferred-billing, debit-card processing system of claim 1 wherein the computer processor system

initiates a payment period after the statement is made available to the account holder; and

automatically and electronically debits the account for debit transactions made during the billing cycle when the payment period has elapsed.

4. The deferred-billing, debit-card processing system of claim 3 wherein the payment period is 15 days.

5. The deferred-billing, debit-card processing system of claim 1 wherein the billing cycle is a monthly billing cycle.

6. The deferred-billing, debit-card processing system according to claim 1 wherein the transaction card is capable of use in automated teller machines to make automated banking transactions.

7. The deferred-billing, debit-card processing system according to claim 1 further comprising a printer system for generating the statement to report debit purchase transaction information related to the billing cycle to the debit card account holder.

8. The deferred-billing, debit-card processing system according to claim 1 wherein the financial institution account is a checking account.

9. The deferred-billing, debit-card processing system according to claim 1 wherein the financial institution account is a savings account.

10. The deferred-billing, debit-card processing system according to claim 1 wherein the financial institution is one of the group consisting of a bank, a savings bank, a trust company, a savings and loan association, a savings association, a credit union.

11. The deferred-billing, debit-card processing system according to claim 1 wherein the source of payment includes at least one of the group consisting of a transfer from a predetermined account, a transfer from a separate account, a transfer to a separate account, a transfer from a credit line, a transfer from a credit line by phone, a manual transfer of funds from outside the financial institution, an electronic transfer of funds from outside the financial institution.

12. A deferred-billing, debit-card processing system for managing an account holder's financial institution account, the processing system being configured for use with a transaction card encoded with computer-readable information for identifying a financial institution and the account holder's account at the financial institution, the card being capable of use in making debit transactions as well as in automated teller machines to make automated banking transactions, the processing system comprising,

a receiver for receiving electronically transmitted debit transaction information from remote points of sale, the debit transaction information being produced at remote points of sale when the encoded information on the transaction card is read by a computer in a debit transaction,

a computer-readable memory system for retrievably storing the debit transaction information,

a computer processor system for electronically recalling the debit transaction information from the memory system and for aggregating the debit transaction information for a billing cycle in a statement showing an accrued debit balance,

wherein the processing system stores the debit transaction information without automatically debiting the debit transactions against the account until after the end of the billing cycle and after the statement is made available to the account holder and after a predetermined payment period elapses once the statement is made available to account holder, during which payment period the account holder is given an opportunity to provide a source of payment to cover all or part of the accrued debit balance.

13. The deferred-billing, debit-card processing system of claim 12 wherein the financial institution account is a checking account.

14. A method for managing an account holder's financial institution account with a debit card, the method comprising:

receiving electronically transmitted debit transaction information generated during use of the debit card by a debit card holder,

storing the debit transaction information in computer-readable media without debiting the transaction against the financial institution account,

producing on a scheduled date a statement reporting debit transaction information for a billing cycle,

making the statement available to the account holder,

automatically debiting the financial institution account for debit transactions of the billing cycle after a payment period elapses following the date the statement is made available to the account holder,

wherein the debit card holder is able to make debit purchases using the debit card, the debit purchases being automatically debited to the financial institution account but not until after the end of the billing cycle and after the account holder is provided an opportunity to review the debit transactions for the billing cycle, thereby allowing the account holder an opportunity to provide a source of payment other than the account itself.

15. The method of claim 14 further comprising the step of verifying upon receipt of electronically transmitted debit transaction information that the financial institution account has not exceeded a predetermined periodic deferred debit limit.

16. The method of claim 14 wherein the billing cycle is a monthly billing cycle.

17. The method of claim 14 wherein the payment period is 15 days.

18. The method of claim 14 wherein the debit card is capable of use in automated teller machines to make automated banking transactions.

19. A deferred-billing, debit-card processing system for managing an account holder's financial institution account, the processing system being configured for use with a debit card encoded with computer-readable information for identifying a financial institution and the account holder's account at the financial institution, the debit card being capable of use in making debit transactions, the processing system comprising,

means for receiving electronically transmitted debit transaction information from remote points of sale, the debit transaction information being produced at remote points of sale when the encoded information on the debit card is read by a computer in a debit transaction,

means for encoding the debit transaction information in computer-readable code and storing the code in computer-readable media,

means for electronically recalling the debit transaction information from the storing means and for aggregating the debit transaction information for a billing cycle in a statement showing an accrued debit balance,

means for reporting the statement of debit transactions to the debit card account holder,

means for automatically and electronically debiting the debit transactions to the account once a payment period elapses after the statement is made available to the account holder,

wherein the processing system stores the debit transaction information without automatically debiting the debit transactions against the account until after the end of the billing cycle and after the statement is made available to the account holder and after a predetermined payment period elapses once the statement is made available to the account holder, during which payment period the account holder is given an opportunity to provide a source of payment to cover all or part of the accrued debit balance.

20. The system of claim 19 wherein the debit card is also capable of use in automated teller machines to make banking transactions.

21. A deferred-billing, debit-card processing system for use in managing an account holder's financial institution account and for use with a transaction card encoded with computer-readable information for identifying a financial institution and the account holder's account at the financial institution, the card being capable of use in making debit transactions as well as automated banking transactions, the processing system being configured to process debit transaction information received electronically from remote points of sale without automatically debiting the debit transactions against the account until after the account holder is given an opportunity to provide a source of payment to cover all or part of the accrued debit balance.

22. The processing system according to claim 21 further configured to debit the debit transactions against the account after the end of a billing cycle and after a payment period elapses following the billing cycle.

23. A deferred-billing, debit-card system for managing an account holder's financial institution account, the processing system comprising,

a transaction card encoded with computer-readable information for identifying a financial institution and the account holder's account at the financial institution, the card being capable of use in making debit transactions

a receiver for receiving electronically transmitted debit transaction information from remote points of sale, the debit transaction information being produced at remote points of sale when the encoded information on the transaction card is read by a computer in a debit transaction,

a computer-readable memory system for retrievably storing the debit transaction information,

a computer processor system for electronically recalling the debit transaction information from the memory system and for aggregating the debit transaction information for a billing cycle in a statement showing an accrued debit balance,

wherein the system stores the debit transaction information without automatically debiting the debit transactions against the account until after the end of the billing cycle and after the account holder is given an opportunity to provide a source of payment to cover all or part of the accrued debit balance.

24. The deferred-billing, debit-card system of claim 23 wherein the computer processor system makes the statement available to the account holder by one of the steps of the group consisting of transmitting the statement to the account holder electronically, posting the statement at a secure site for access by the account holder, or printing a hard copy of the statement to be sent to the account holder by conventional mail.

25. The deferred-billing, debit-card system of claim 23 wherein the computer processor system

initiates a payment period after the statement is made available to the account holder; and

automatically and electronically debits the account for debit transactions made during the billing cycle when the payment period has elapsed.

26. The deferred-billing, debit-card system of claim 25 wherein the payment period is 15 days.

27. The deferred-billing, debit-card system of claim 23 wherein the billing cycle is a monthly billing cycle.

28. The deferred-billing, debit-card system according to claim 23 wherein the transaction card is capable of use in automated teller machines to make automated banking transactions.

29. The deferred-billing, debit-card system according to claim 23 further comprising a printer system for generating the statement to report debit purchase transaction information related to the billing cycle to the debit card account holder.

30. The deferred-billing, debit-card system according to claim 23 wherein the financial institution account is a checking account.

31. The deferred-billing, debit-card system according to claim 23 wherein the financial institution account is a savings account.

32. The deferred-billing, debit-card system according to claim 23 wherein the financial institution is one of the group consisting of a bank, a savings bank, a trust company, a savings and loan association, a savings association, a credit union.

33. The deferred-billing, debit-card system according to claim 23 wherein the source of payment includes at least one of the group consisting of a transfer from a predetermined account, a transfer from a separate account, a transfer to a separate account, a transfer from a credit line, a transfer from a credit line by phone, a manual transfer of funds from outside the financial institution, an electronic transfer of funds from outside the financial institution.

34. A deferred-billing, debit-card system for managing an account holder's financial institution account, the system comprising,

a transaction card encoded with computer-readable information for identifying a financial institution and the account holder's account at the financial institution, the

card being capable of use in making debit transactions as well as in automated teller machines to make automated banking transactions,

a receiver for receiving electronically transmitted debit transaction information from remote points of sale, the debit transaction information being produced at remote points of sale when the encoded information on the transaction card is read by a computer in a debit transaction,

a computer-readable memory system for retrievably storing the debit transaction information,

a computer processor system for electronically recalling the debit transaction information from the memory system and for aggregating the debit transaction information for a billing cycle in a statement showing an accrued debit balance,

wherein the system stores the debit transaction information without automatically debiting the debit transactions against the account until after the end of the billing cycle and after the statement is made available to the account holder and after a predetermined payment period elapses once the statement is made available to account holder, during which payment period the account holder is given an opportunity to provide a source of payment to cover all or part of the accrued debit balance.

35. The deferred-billing, debit-card system of claim 34 wherein the financial institution account is a checking account.

36. A method for managing an account holder's financial institution account with a debit card, the method comprising:

providing an account holder with a debit card, the debit card being encoded with information for identifying a card issuing financial institution and an account at the card issuing financial institution, the debit card being capable of use in making debit transactions,

receiving electronically transmitted debit transaction information generated during use of the debit card by a debit card holder,

storing the debit transaction information in computer-readable media without debiting the transaction against the financial institution account,

producing on a scheduled date a statement reporting debit transaction information for a billing cycle,

making the statement available to the account holder,

automatically debiting the financial institution account for debit transactions of the billing cycle after a payment period elapses following the date the statement is made available to the account holder,

wherein the debit card holder is able to make debit purchases using the debit card, the debit purchases being automatically debited to the financial institution account but not until after the end of the billing cycle and after the account holder is provided an opportunity to review the debit transactions for the billing cycle, thereby allowing the account holder an opportunity to provide a source of payment other than the account itself.

37. The method of claim 36 further comprising the step of verifying upon receipt of electronically transmitted debit transaction information that the financial institution account has not exceeded a predetermined periodic deferred debit limit.

38. The method of claim 36 wherein the billing cycle is a monthly billing cycle.

39. The method of claim 36 wherein the payment period is 15 days.

40. The method of claim 36 wherein the debit card is capable of use in automated teller machines to make automated banking transactions.

41. A deferred-billing, debit-card system for managing an account holder's financial institution account, the system comprising,

a debit card encoded with computer-readable information for identifying a financial institution and the account holder's account at the financial institution, the debit card being capable of use in making debit transactions,

means for receiving electronically transmitted debit transaction information from remote points of sale, the debit transaction information being produced at remote points of sale when the encoded information on the debit card is read by a computer in a debit transaction,

means for encoding the debit transaction information in computer-readable code and storing the code in computer-readable media,

means for electronically recalling the debit transaction information from the storing means and for aggregating the debit transaction information for a billing cycle in a statement showing an accrued debit balance,

means for reporting the statement of debit transactions to the debit card account holder,

means for automatically and electronically debiting the debit transactions to the account once a payment period elapses after the statement is made available to the account holder,

wherein the system stores the debit transaction information without automatically debiting the debit transactions against the account until after the end of the billing cycle and after the statement is made available to the account holder and after a predetermined payment period elapses once the statement is made available to the account holder, during which payment period the account holder is given an opportunity to provide a source of payment to cover all or part of the accrued debit balance.

42. The system of claim 41 wherein the debit card is also capable of use in automated teller machines to make banking transactions.

43. A deferred-billing, debit-card system for use in managing an account holder's financial institution account, the system including a transaction card encoded with computer-readable information for identifying a financial institution and the account holder's account at the financial institution, the card being capable of use in making debit transactions as well as automated banking transactions, the system being configured to process debit transaction information received electronically from remote points of sale without automatically debiting the debit transactions against the account until after the account holder is given an opportunity to provide a source of payment to cover all or part of the accrued debit balance.

44. The system according to claim 43 further configured to debit the debit transactions against the account after the end of a billing cycle and after a payment period elapses following the billing cycle.

Abstract

A system and method for managing a financial institution account with a single transaction card capable of use as a debit card and as an automated banking card wherein debit transactions are stored by a managing computer system for a billing cycle without being automatically debited against the account until after all debit transactions for the billing cycle are reported to the holder of the account and a payment period has elapsed after the billing cycle.

FIG. 1

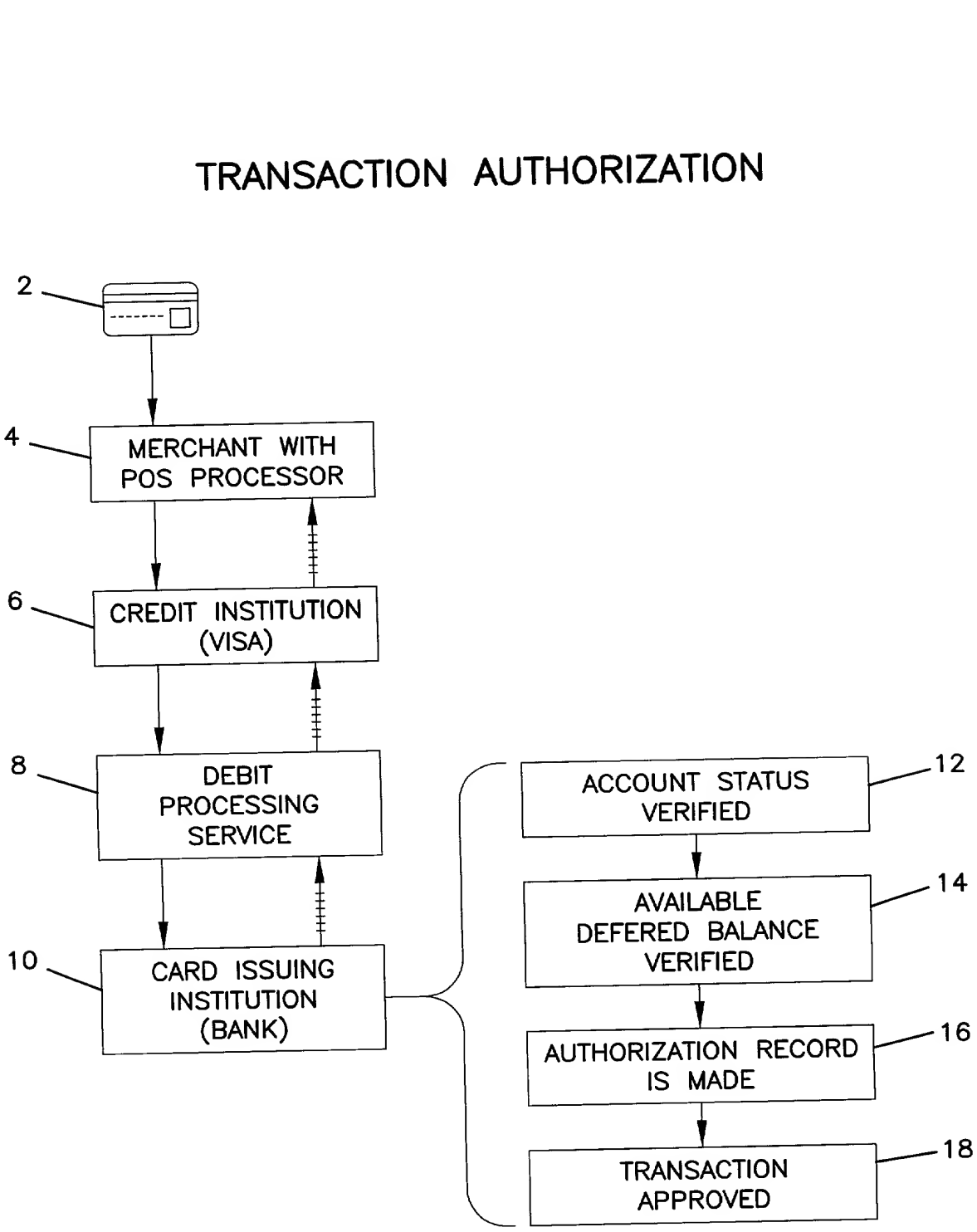

TRANSACTION AUTHORIZATION
2
4
MERCHANT WITH POS PROCESSOR
6
CREDIT INSTITUTION (VISA)
8
DEBIT PROCESSING SERVICE
10
CARD ISSUING INSTITUTION (BANK)
ACCOUNT STATUS VERIFIED
12
AVAILABLE DEFERED BALANCE VERIFIED
14
AUTHORIZATION RECORD IS MADE
16
TRANSACTION APPROVED
18

FIG. 2

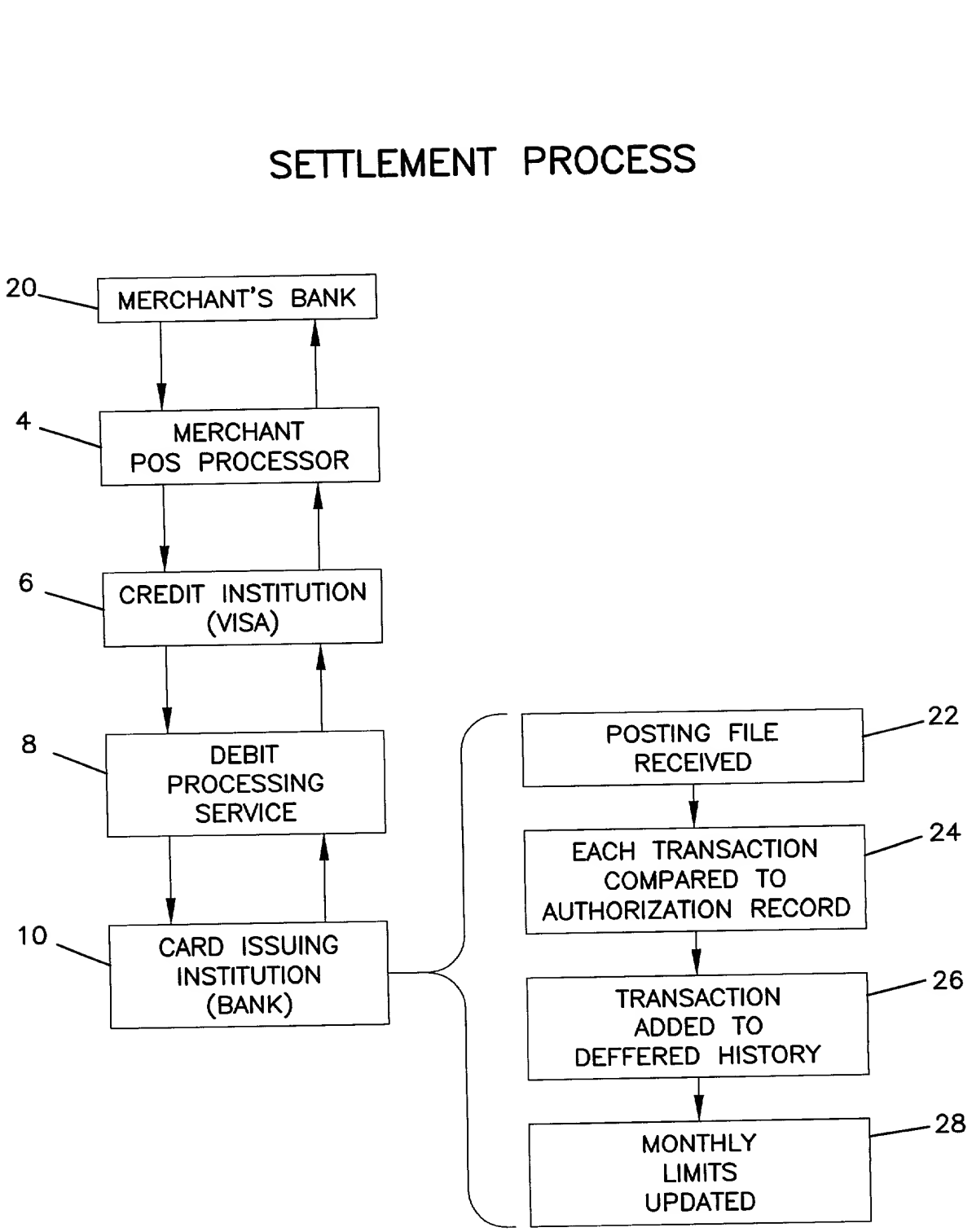

SETTLEMENT PROCESS
20
MERCHANT'S BANK
4
MERCHANT POS PROCESSOR
6
CREDIT INSTITUTION (VISA)
8
DEBIT PROCESSING SERVICE
10
CARD ISSUING INSTITUTION (BANK)
POSTING FILE RECEIVED
22
EACH TRANSACTION COMPARED TO AUTHORIZATION RECORD
24
TRANSACTION ADDED TO DEFFERED HISTORY
26
MONTHLY LIMITS UPDATED
28

FIG. 3

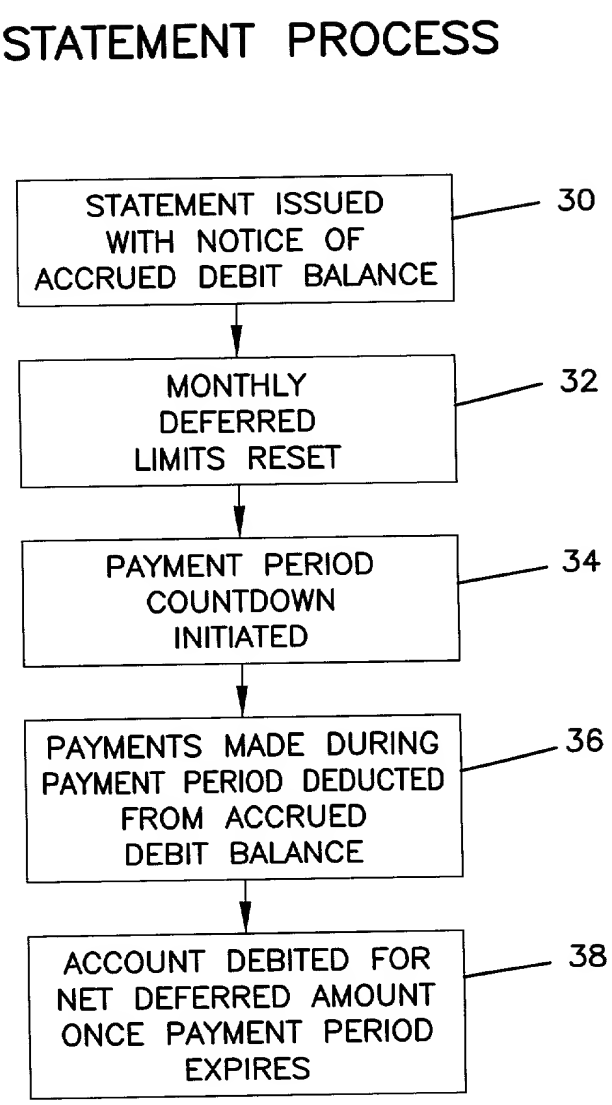

STATEMENT PROCESS
STATEMENT ISSUED WITH NOTICE OF ACCRUED DEBIT BALANCE
30
MONTHLY DEFERRED LIMITS RESET
32
PAYMENT PERIOD COUNTDOWN INITIATED
34
PAYMENTS MADE DURING PAYMENT PERIOD DEDUCTED FROM ACCRUED DEBIT BALANCE
36
ACCOUNT DEBITED FOR NET DEFERRED AMOUNT ONCE PAYMENT PERIOD EXPIRES
38

FIG. 4

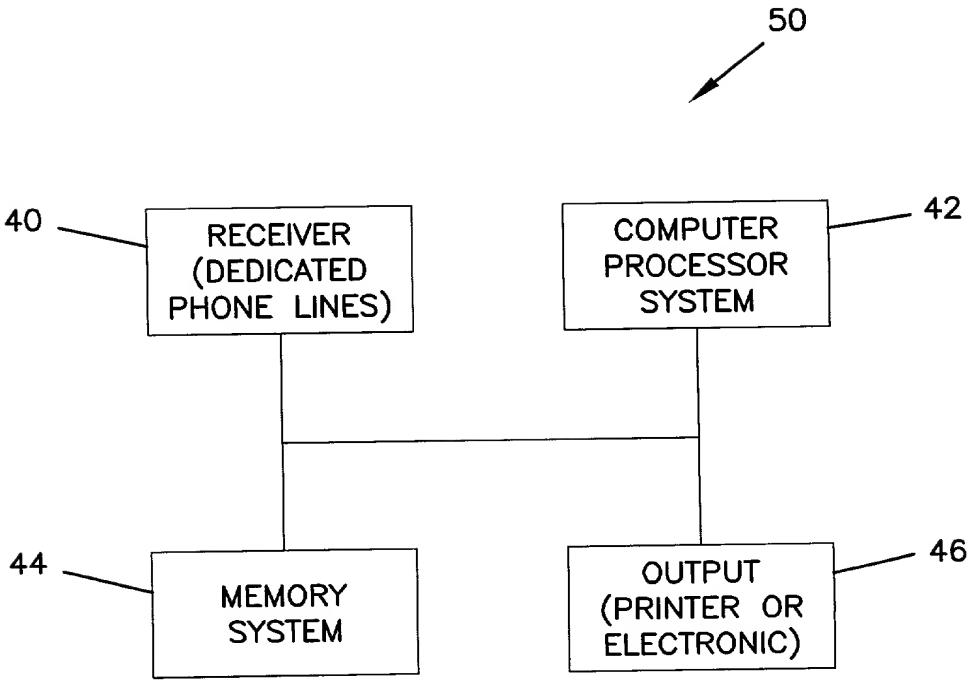
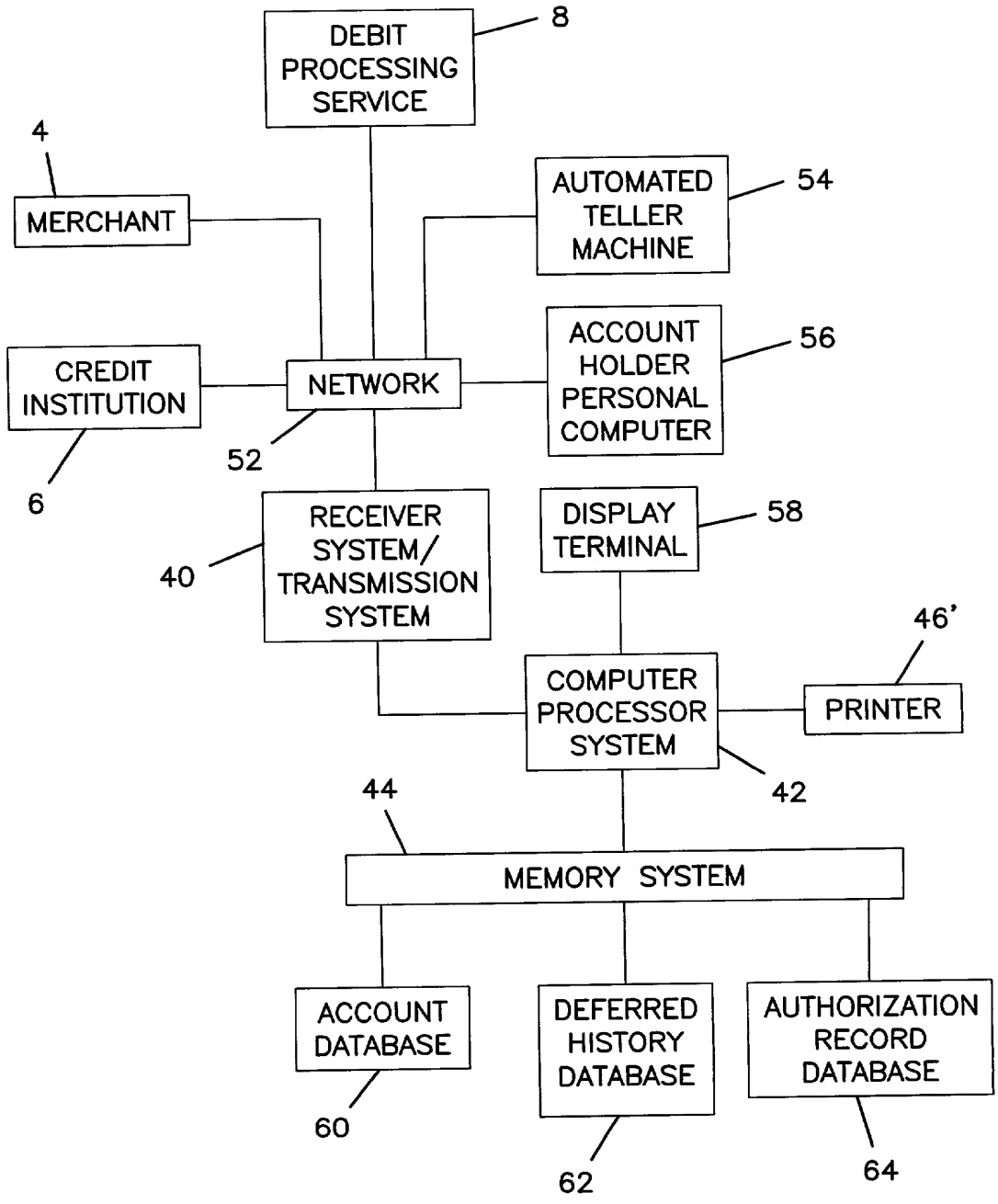

50
40
RECEIVER (DEDICATED PHONE LINES)
42
COMPUTER PROCESSOR SYSTEM
44
MEMORY SYSTEM
46
OUTPUT (PRINTER OR ELECTRONIC)

FIG. 5


DEBIT PROCESSING SERVICE
8
4
MERCHANT
AUTOMATED TELLER MACHINE
54
CREDIT INSTITUTION
NETWORK
ACCOUNT HOLDER PERSONAL COMPUTER
56
52
6
RECEIVER SYSTEM/ TRANSMISSION SYSTEM
40
DISPLAY TERMINAL
58
46'
COMPUTER PROCESSOR SYSTEM
PRINTER
42
44
MEMORY SYSTEM
ACCOUNT DATABASE
DEFERRED HISTORY DATABASE
AUTHORIZATION RECORD DATABASE
60
62
64

Attorney Docket No. 11348.36US01

MERCHANT & GOULD P.C.

United States Patent Application

COMBINED DECLARATION AND POWER OF ATTORNEY

As a below named inventor I hereby declare that: my residence, post office address and citizenship are as stated below next to my name; that

I verily believe I am the original, first and sole inventor (if only one name is listed below) or a joint inventor (if plural inventors are named below) of the subject matter which is claimed and for which a patent is sought on the invention entitled: DEBIT CARD BILLING SYSTEM

The specification of which
a. ☒ is attached hereto
b. ☐ was filed on as application serial no. and was amended on (if applicable) (in the case of a PCT-filed application) described and claimed in international no. filed and as amended on (if any), which I have reviewed and for which I solicit a United States patent.

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the patentability of this application in accordance with Title 37, Code of Federal Regulations, § 1.56 (attached hereto).

I hereby claim foreign priority benefits under Title 35, United States Code, § 119/365 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on the basis of which priority is claimed:

a. ☒ no such applications have been filed.
b. ☐ such applications have been filed as follows:

FOREIGN APPLICATION(S), IF ANY, CLAIMING PRIORITY UNDER 35 USC § 119			
COUNTRY	APPLICATION NUMBER	DATE OF FILING (day, month, year)	DATE OF ISSUE (day, month, year)
ALL FOREIGN APPLICATION(S), IF ANY, FILED BEFORE THE PRIORITY APPLICATION(S)			
COUNTRY	APPLICATION NUMBER	DATE OF FILING (day, month, year)	DATE OF ISSUE (day, month, year)

I hereby claim the benefit under Title 35, United States Code, § 120/365 of any United States and PCT international application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, § 112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, § 1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application.

U.S. APPLICATION NUMBER	DATE OF FILING (day, month, year)	STATUS (patented, pending, abandoned)

I hereby claim the benefit under Title 35, United States Code § 119(e) of any United States provisional application(s) listed below:

U.S. PROVISIONAL APPLICATION NUMBER	DATE OF FILING (Day, Month, Year)

I hereby appoint the following attorney(s) and/or patent agent(s) to prosecute this application and to transact all business in the Patent and Trademark Office connected herewith:

Albrecht, John W.	Reg. No. 40,481	Kowalchyk, Alan W.	Reg. No. 31,535
Ali, M. Jeffer	Reg. No. 46,359	Kowalchyk, Katherine M.	Reg. No. 36,848
Anderson, Gregg I.	Reg. No. 28,828	Lacy, Paul E.	Reg. No. 38,946
Batzli, Brian H.	Reg. No. 32,960	Larson, James A.	Reg. No. 40,443
Beard, John L.	Reg. No. 27,612	Liepa, Mara E.	Reg. No. 40,066
Berns, John M.	Reg. No. 43,496	Lindquist, Timothy A.	Reg. No. 40,701
Black, Bruce E.	Reg. No. 41,622	Lycke, Lawrence E.	Reg. No. 38,540
Branch, John W.	Reg. No. 41,633	McAuley, Steven A.	Reg. No. 46,084
Bremer, Dennis C.	Reg. No. 40,528	McDonald, Daniel W.	Reg. No. 32,044
Bruess, Steven C.	Reg. No. 34,130	McIntyre, Jr., William F.	Reg. No. 44,921
Byrne, Linda M.	Reg. No. 32,404	Mueller, Douglas P.	Reg. No. 30,300
Campbell, Keith	Reg. No.P-46,597	Pauly, Daniel M.	Reg. No. 40,123
Carlson, Alan G.	Reg. No. 25,959	Phillips, Bryan K.	Reg. No. P-46,990
Caspers, Philip P.	Reg. No. 33,227	Phillips, John B.	Reg. No. 37,206
Chiapetta, James R.	Reg. No. 39,634	Plunkett, Theodore	Reg. No. 37,209
Clifford, John A.	Reg. No. 30,247	Prendergast, Paul	Reg. No. 46,068
Daignault, Ronald A.	Reg. No. 25,968	Pytel, Melissa J.	Reg. No. 41,512
Daley, Dennis R.	Reg. No. 34,994	Qualey, Terry	Reg. No. 25,148
Dalglish, Leslie E.	Reg. No. 40,579	Reich, John C.	Reg. No. 37,703
Daulton, Julie R.	Reg. No. 36,414	Reiland, Earl D.	Reg. No. 25,767
DeVries Smith, Katherine M.	Reg. No. 42,157	Schmaltz, David G.	Reg. No. 39,828
DiPietro, Mark J.	Reg. No. 28,707	Schuman, Mark D.	Reg. No. 31,197
Edell, Robert T.	Reg. No. 20,187	Schumann, Michael D.	Reg. No. 30,422
Epp Ryan, Sandra	Reg. No. 39,667	Scull, Timothy B.	Reg. No. 42,137
Glance, Robert J.	Reg. No. 40,620	Sebald, Gregory A.	Reg. No. 33,280
Goggin, Matthew J.	Reg. No. 44,125	Skoog, Mark T.	Reg. No. 40,178
Golla, Charles E.	Reg. No. 26,896	Spellman, Steven J.	Reg. No. 45,124
Gorman, Alan G.	Reg. No. 38,472	Stoll-DeBell, Kirstin L.	Reg. No. 43,164
Gould, John D.	Reg. No. 18,223	Sumner, John P.	Reg. No. 29,114
Gregson, Richard	Reg. No. 41,804	Swenson, Erik G.	Reg. No. 45,147
Gresens, John J.	Reg. No. 33,112	Tellekson, David K.	Reg. No. 32,314
Hamer, Samuel A.	Reg. No. P-46,754	Trembath, Jon R.	Reg. No. 38,344
Hamre, Curtis B.	Reg. No. 29,165	Underhill, Albert L.	Reg. No. 27,403
Harrison, Kevin C.	Reg. No.P-46,759	Vandenburgh, J. Derek	Reg. No. 32,179
Hertzberg, Brett A.	Reg. No. 42,660	Wahl, John R.	Reg. No. 33,044
Hillson, Randall A.	Reg. No. 31,838	Weaver, Karrie G.	Reg. No. 43,245
Holzer, Jr., Richard J.	Reg. No. 42,668	Welter, Paul A.	Reg. No. 20,890
Johnston, Scott W.	Reg. No. 39,721	Whipps, Brian	Reg. No. 43,261
Kadievitch, Natalie D.	Reg. No. 34,196	Wickhem, J. Scot	Reg. No. 41,376
Karjeker, Shaukat	Reg. No. 34,049	Williams, Douglas J.	Reg. No. 27,054
Kastelic, Joseph M.	Reg. No. 37,160	Witt, Jonelle	Reg. No. 41,980
Kettelberger, Denise	Reg. No. 33,924	Wu, Tong	Reg. No. 43,361
Keys, Jeramie J.	Reg. No. 42,724	Xu, Min S.	Reg. No. 39,536
Knearl, Homer L.	Reg. No. 21,197	Zeuli, Anthony R.	Reg. No. 45,255

I hereby authorize them to act and rely on instructions from and communicate directly with the person/assignee/attorney/firm/ organization who/which first sends/sent this case to them and by whom/which I hereby declare that I have consented after full disclosure to be represented unless/until I instruct Merchant & Gould P.C. to the contrary.

Please direct all correspondence in this case to Merchant & Gould P.C. at the address indicated below:

Merchant & Gould P.C.
P.O. Box 2903
Minneapolis, MN 55402-0903

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

2	**Full Name Of Inventor**	**Family Name** COOPER	**First Given Name** WILLIAM	**Second Given Name** A.
0	**Residence & Citizenship**	**City** WAYZATA	**State or Foreign Country** MINNESOTA	**Country of Citizenship** USA
1	**Post Office Address**	**Post Office Address** 300 FERNDALE DRIVE	**City** WAYZATA	**State & Zip Code/Country** MINNESOTA 55391/USA
Signature of Inventor 201:			**Date:** July 12, 2000	

§ 1.56 Duty to disclose information material to patentability.

(a) A patent by its very nature is affected with a public interest. The public interest is best served, and the most effective patent examination occurs when, at the time an application is being examined, the Office is aware of and evaluates the teachings of all information material to patentability. Each individual associated with the filing and prosecution of a patent application has a duty of candor and good faith in dealing with the Office, which includes a duty to disclose to the Office all information known to that individual to be material to patentability as defined in this section. The duty to disclose information exists with respect to each pending claim until the claim is canceled or withdrawn from consideration, or the application becomes abandoned. Information material to the patentability of a claim that is canceled or withdrawn from consideration need not be submitted if the information is not material to the patentability of any claim remaining under consideration in the application. There is no duty to submit information which is not material to the patentability of any existing claim. The duty to disclose all information known to be material to patentability is deemed to be satisfied if all information known to be material to patentability of any claim issued in a patent was cited by the Office or submitted to the Office in the manner prescribed by §§ 1.97(b)-(d) and 1.98. However, no patent will be granted on an application in connection with which fraud on the Office was practiced or attempted or the duty of disclosure was violated through bad faith or intentional misconduct. The Office encourages applicants to carefully examine:

(1) prior art cited in search reports of a foreign patent office in a counterpart application, and

(2) the closest information over which individuals associated with the filing or prosecution of a patent application believe any pending claim patentably defines, to make sure that any material information contained therein is disclosed to the Office.

(b) Under this section, information is material to patentability when it is not cumulative to information already of record or being made of record in the application, and

(1) It establishes, by itself or in combination with other information, a prima facie case of unpatentability of a claim; or

(2) It refutes, or is inconsistent with, a position the applicant takes in:

(i) Opposing an argument of unpatentability relied on by the Office, or

(ii) Asserting an argument of patentability.

A prima facie case of unpatentability is established when the information compels a conclusion that a claim is unpatentable under the preponderance of evidence, burden-of-proof standard, giving each term in the claim its broadest reasonable construction consistent with the specification, and before any consideration is given to evidence which may be submitted in an attempt to establish a contrary conclusion of patentability.

(c) Individuals associated with the filing or prosecution of a patent application within the meaning of this section are:

(1) Each inventor named in the application:

(2) Each attorney or agent who prepares or prosecutes the application; and

(3) Every other person who is substantively involved in the preparation or prosecution of the application and who is associated with the inventor, with the assignee or with anyone to whom there is an obligation to assign the application.

(d) Individuals other than the attorney, agent or inventor may comply with this section by disclosing information to the attorney, agent, or inventor.